These rockets are at present stocked by Modern Gunsmiths Ltd., Coimbatore, but at a price many ryots would be unwilling to pay. The fireworks manufacturers produce them cheaply, but it is essential that they are of the right kind.

A great improvement would be to get the manufacturers to insert a wick into every rocket head, the same as many types of fireworks have, which will simplify ignition. At present it is sometimes not easy on a windy or damp night to ignite the rockets.

The rockets must be made easily available to the ryot. While I was the owner of Honnametti Estate in the Kollegal Taluk, we utilised these bamboo rockets with great success in our ragi fields at the foot of the Billigirirangan Hills; and I helped the neighbouring ryots as well. But to purchase the rockets for themselves they had to travel between 20 and 30 miles to Kollegal to the one licensee stocking them there, and quite often he was out of stock. I urged on Government to permit stocks to be held by Revenue and Agricultural Inspectors, and preferably by village headmen. The black powder used in the manufacture of these rockets lasts a long time. I have rockets now in good and usable condition that I procured in 1953. Needless to say they should be kept out of the reach of children!

I notice that the newer rockets supplied by Modern Gunsmiths Ltd., Coimbatore, are of a smaller size. To be definitely effective in dealing with elephants I would advise the use of rockets double the size of those at present supplied by them.

Rockets should, naturally, be stored in a dry place.

DUPABURRAY BUNGALOW, ATTIKAN P.O., VIA MYSORE, March 21, 1958.

R. C. MORRIS

9. BIRD NOTES FROM NEPAL

The Nepal Valley is bounded on the south-east by the ridge of Phul Chowk which, covered as it is with natural forest, has always been a happy hunting ground for naturalists in Nepal. South-east of Phul Chowk lies another mountain mass, which by contrast has been totally neglected. It is connected with Phul Chowk by a narrow col at about 6,500 ft. There is almost no surface water to be found on it in the dry weather, so that camping is awkward. However, we heard that there was water at one place, and on a short leave last spring (1957) decided to explore the area, as there was no time to

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get up to the high hills north of Kathmandu, which were our main objective. We found the country most interesting.

The ridge is about 5 miles long, and some 3 miles of this lies above 9,000 ft. It is known as the Nangi Danda. At the SE, end it falls away to another col 7,500 ft, and then rises and ends in the mountain Narain Than, just over 9,700 ft. We had no time to explore Narain Than, but could see great bare cliffs where perhaps the swifts breed. On Nangi Danda were many plants not usually found on Phul Chowk. Some of these, like Berberis wallichiana, grow here down to 8,000 ft. as they do on the higher hills, but on Phul Chowk and Sheopuri which just touch 9,000 ft, they are not found. I suppose they need a greater area above 9,000 ft. to grow at all. The chief interest of Nangi Danda are the stands of magnificent Tsuga brunoniana, the tengre salla of the Nepalese. These trees do not grow in any numbers anywhere else round the Kathmandu Valley. There is also a great deal of hill bamboo. We camped at the only spring, Kali Pani, where the scanty water rather lived up to its name but was cold and quite pure, once the vegetable matter had been strained away. It was at about 9,300 ft, elevation. We were there from April 11th to 16th, when the following bird notes were made. A month later would have been better, as by then all the migrant birds would have left, but we should have missed the glory of the tree rhododendron. As it was, these were in full flower, pink, white, and red, a most beautiful sight, which we had not expected as they were already over on Phul Chowk. Skimmia laureola was also in flower, smelling delightfully of orange, and there was an occasional tree of the wonderful magnolia (campbelli?) with huge waxy white flowers on the still leafless branches. The ridge is uninhabited during the dry weather, and the forest has no doubt been preserved by the lack of water. Every day whole families come up from the villages below to collect firewood, grass, and oak leaves for their buffaloes. The oaks (Q. semecarpifolia) are in the same sad condition as they are in most places in Nepal near villages. They have almost no branches, the leaves sprouting close to the trunk on small stunted twigs. However, we saw plenty of young trees about, and the people assured us that the leaves had been cut and the branches lopped for generations without killing the trees. During the monsoon, when there is enough grass for the cattle, the trees are allowed to rest for a few months. During the rains, small streams appear everywhere, and we saw the remains of scanty huts where the herdsmen live for a few months with their animals, but there is then enough grass for the oaks to be left alone. Owing to the lack of water very few wild animals were seen, except the odd barking deer near the spring.

Nucifraga caryoctactes hemispila Vigors: Himalayan Nutcracker

This bird is common on the high hills north of Kathmandu, above 9,500 ft. in the blue pine and juniper forest. I have never seen one anywhere near the Valley, but they were established in the *Tsuga* forest. A family party lived near the camp, 3 young fully fledged but still being fed by their parents. They had a regular routine and would fly through the camp in the morning, spend the day crossing 2 ridges of *Tsugas*, N. of the camp, and return each evening about 5 p.m., roosting for the night in a big clump of *Tsugas* quite close to us. We saw other birds, singles and pairs, on the ridges to the south, but no other young birds. Judging from the extent of territory used by this family party, the numbers of birds cannot be very large. I should guess only 4 or 5 pairs for the whole *Tsuga*-covered area. It would be interesting to know what the area of an isolated group like this must be, for it to maintain itself. Of course the numbers may be augmented by fresh individuals from the higher hills.

Paradoxornis nipalensis Hodgson: Ashyeared Suthora

These little birds are found on Phul Chowk, but were very much commoner on the Nangi Danda, where there is a much greater area under bamboo. They never leave the bamboo. We shot a non-breeding female. I imagine they nest during the monsoon.

Kitta flavirostris (Blyth): Yellow billed Magpie

This Magpie replaced the red billed bird everywhere on the Nangi Danda ridge. On Phul Chowk both occur, but the yellow billed species is very scarce and only found in a small area round the top of the mountain.

Certhia nipalensis Blyth: Tree Creeper

A single non-breeding female was shot. This is the only one I have seen during ten years of bird watching in Nepal. It seems to have a curious distribution. Dr. Fleming shot a bird near Pokhara, many miles west of Kathmandu. This must be the most westerly record. Otherwise I know of none seen or collected west of East Nepal. When in London this autumn I compared my bird with those in the British Museum collection. It was very like the Darjeeling specimens. There was only one faded Hodgson skin from Nepal, with no locality. Birds from SE. Tibet were very different, and I should have thought two races were involved. Normally *C. discolor* is the common low level (5,000-9,000 ft.) tree creeper, and *C. familiaris* the high level (9,000-12,000 ft.) bird here.

Alcippe v. vinipectus (Hodgson): Hodgson's Fulvetta

These birds breed on Phul Chowk, but were much more abundant on the Nangi Danda. Breeding was in full swing in mid-April, some birds still building, but most incubating. 6 nests examined, each contained 2 eggs.

Yuhina o. occipitalis Hodgson: Slatyheaded Ixulus

These birds were also very common and breeding.

Zoothera dauma dauma (Latham): Smallbilled Mountain Thrush

Very common, in pairs. For the first time I heard this bird's song. They were singing everywhere, usually from a small bushy tree about 8 ft. from the ground, and were so engrossed that one could get very close to them. They sang on and on for hours with very little variation. They have a few fine notes, but these are connected by a curious medley of squeaks and chuckles, very inferior to the song of other thrushes, or even of the Rock Thrushes. I was very glad to hear this usually silent bird so noisy.

Turdus ruficollis was still present in huge flocks, but we saw neither Zoothera dixoni nor Z. mollissima, which I think leave early for their breeding quarters.

Seicercus burkii (Burton): Blackbrowed Flycatcher-Warbler

Common in pairs and singing, so no doubt they breed here as they do sparingly on Phul Chowk.

Phylloscopus p. pulcher Blyth: Orangebarred Leaf Warbler

Common and singing, but not paired, and as they do not leave Phul Chowk until the middle of April, these were probably also non-breeding birds.

Phylloscopus m. maculipennis (Blyth): Greyfaced Leaf Warbler

Common in pairs, and breeding in the bamboo. A breeding male was shot, and I saw several birds carrying nesting material. They also breed on Phul Chowk, in bamboo above 7,000 ft.

P. r. reguloides (Blyth): Blyth's Leaf Warbler

Very common in pairs and singing continuously. They also breed on Phul Chowk and Sheopuri.

P. magnirostris (Blyth): Largebilled Leaf Warbler

Not seen. We were probably too early for them. They breed

on both Phul Chowk and Sheopuri above 7,000 ft. but I have never heard the distinctive song before the end of April, and not commonly till early May. They frequent broad-leaved tree forest rather than bamboo, and perhaps the Nangi Danda is not suitable for them.

P. n. nitidus Blyth: Green Leaf Warbler

males challenging each other.

A good many seen, and a single non-breeding male was shot. They were singing as they always do on the migration.

Horeites brunnifrons (Hodgson): Rufouscapped Bush Warbler Common but not paired off and may have been still on migration.

Tesia castaneocoronata (Burton): Chestnutheaded Ground Warbler

This bird is common on Phul Chowk but here it was absolutely abundant. They were in pairs calling and singing all day, and were found everywhere in bamboo, amongst ferns in nallas amongst Viburnum bushes, etc. One day I watched 2 birds displaying. They were in the same bush, but one kept mostly to the upper branches, where it ran or rather strutted backwards and forwards with wings drooping, bill turned straight upwards, yellow throat puffed out, tiny tail held bolt upright, uttering a continual rapid 'tsk tsk tsk' on and on, occasionally varied by the very similar song 'tik ti ti tik ti ti.'. The second bird behaved in exactly the same way in the lower part of the bush. Their excitement was so intense that the birds took no notice of me. I could have caught them

easily. Every now and again the 2 birds would approach each other, the excitement rising to fever pitch, but when about 2 inches apart they would turn away and resume their usual positions but with somewhat lessened excitement. This was repeated again and again, and after half an hour of it I was obliged to leave them still at it, so never discovered if they were a pair in some sort of courtship display or 2

Rhipidura hypoxanthum Hodgson: Yellowbellied Fantail Flycatcher

These were common in pairs and I imagine breed here, as they have left the hills round the valley by the middle of April. An occasional pair breeds on Phul Chowk. Flocks of small finches were seen which I think were siskins (Carduelis thibetana), but could not be sure and we failed to collect one. They are said to breed in larch forest, I wonder if Tsuga trees would do as well. It is only a short flight to Godavari at the foot of Phul Chowk where they winter in large flocks in the alders.

Apus pacificus Latham: Whiterumped Swift

Flocks of these birds were seen flying over the ridge. They were also seen over Phul Chowk in April and May, and I think probably breed on the cliffs of Narain Than.

Spizaëtus nipalensis Hodgson: Hodgson's Hawk-Eagle

A pair of these splendid birds occupied the Nangi Danda ridge. They are also seen on Phul Chowk, and perhaps the one pair needs the whole territory. Black and Serpent Eagles occupied the valleys between Phul Chowk and Nangi Danda, but were not seen on the ridge itself.

Arborophila torqueola (Valenciennes): Hill Partridge

Very common. The single plaintive whistle would sound morning and evening round our camp. They were very partial to the bamboo jungle.

British Embassy, Kathmandu, Nepal, March 25, 1958.

(Mrs.) DESIRÉE PROUD

10. WOODPECKERS DRUMMING

I was very interested to read the note in the *Journal* for April 1957 on the drumming of woodpeckers. As this is usually only heard in spring, I have always imagined it was in some way connected with the breeding display. I have observed the following woodpeckers drumming in Nepal:

Picus canus Gmelin: Blacknaped Woodpecker. I see this bird is included in your list of Woodpeckers which drum. It is common here, and the 4-syllable whistle is heard from March to May, but curiously I have never heard it drum.

Picus chlorolophus Vieillot: Lesser Yellownaped Woodpecker. Only occasionally in spring.

Dendrocopos hyperythrus (Gould): Rufousbellied Woodpecker. Drums frequently in May, usually on Quercus semecarpifolia. Not heard in any other month.

D. macei Vieillot: Fulvousbreasted Woodpecker. Heard only once, a very gentle drumming in late February.

D. auriceps (Vigors): Brownfronted Pied Woodpecker. Frequently heard and seen drumming for considerable periods during late March and April.

Micropternus brachyurus (Vieillot): Rufous Woodpecker. This is the master drummer of them all. As the birds select each year a clump of bamboos in the Indian Embassy garden where I can watch them from my window, I have kept careful notes of the dates. The earliest date is about the end of March, but this is a half hearted affair; the real drumming starts about 12th April, reaches a climax about the 16th, and is heard no more after 21st April. There are always two birds present, but only one (the male?) drums; the second bird appears to take no interest. The drumming starts gently, works up to a reverberating crescendo of sound which can be heard nearly half a mile away, and then gradually slows down and stops. There is usually a 2- or 3-minute interval between the bouts of drumming, while the bird sits quietly on some side branch. It then hops back on to the main bamboo stem and the whole thing starts again. For a day, or two at most, this goes on for the greater part of the day, then it is heard infrequently for a few days longer. I have never heard this woodpecker drum on any other trees than bamboos.

Picumnus innominatus Burton: Speckled Piculet. I have often seen this bird drumming quietly, and I rather think at any time of the year, but am not quite sure of this.

British Embassy, Kathmandu, Nepal, March 25, 1958.

(Mrs.) DESIRÉE PROUD

11. BLUETAILED BEE-EATER MEROPS PHILIPPINUS LINNAEUS IN WESTERN SAURASHTRA

On Sunday, 11 May 1958, I drove out about 11 miles from Veraval on the west coast of Saurashtra to a place called Sutarapada on the west coast. On my way back just a few miles from this village I saw large flocks of what were unmistakably Bluetailed Beeeaters. I estimated the flock, which was loosely scattered over barren ground and ploughed fields, to consist of at least 60 to 80 birds. They were flying low over the ground and settling now and then on low stubble and clods of earth, uttering subdued calls *chivip*, *chivip*, a sort of rippling sound and not the usual *pruk*, *pruk*. The birds were in full plumage, and appeared smaller in size than the Bluecheeked Bee-eater. They emitted a series of different call notes and appeared to be migrating in a north-westerly direction. They allowed close